



SEQUENCE LISTING

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<120> AUTOANTIGENIC FRAGMENTS, METHODS AND  
ASSAYS

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 Cys Ser Ile Phe Ile Lys Ile Ile Asp Arg Ile His Gly Thr Glu Glu  
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 Gly Gln Gln Ile Leu Lys Gln Pro Val Ser Glu Arg Leu Asp Phe Val  
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 Cys Ser Phe Leu Gln Lys Asn Arg Lys His Pro Ser Ser Pro Glu Cys  
 65 70 75 80  
 Leu Val Ser Ala Gln Lys Val Leu Glu Gly Ser Glu Leu Glu Leu Ala  
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Lys	Met	Thr	Met	Leu	Leu	Leu	Tyr	His	Ser	Thr	Met	Ser	Ser	Lys	Ser	100	105	110
Pro	Arg	Asp	Trp	Glu	Gln	Phe	Glu	Tyr	Lys	Ile	Gln	Ala	Glu	Leu	Ala	115	120	125
Val	Ile	Leu	Lys	Phe	Val	Leu	Asp	His	Glu	Asp	Gly	Leu	Asn	Leu	Asn	130	135	140
Glu	Asp	Leu	Glu	Asn	Phe	Leu	Gln	Lys	Ala	Pro	Val	Pro	Ser	Thr	Cys	145	150	155
Ser	Ser	Thr	Phe	Pro	Glu	Glu	Leu	Ser	Pro	Pro	Ser	His	Gln	Ala	Lys	165	170	175
Arg	Glu	Ile	Arg	Phe	Leu	Glu	Leu	Gln	Lys	Val	Ala	Ser	Ser	Ser	Ser	180	185	190
Gly	Asn	Asn	Phe	Leu	Ser	Gly	Ser	Pro	Ala	Ser	Pro	Met	Gly	Asp	Ile	195	200	205
Leu	Gln	Thr	Pro	Gln	Phe	Gln	Met	Arg	Arg	Leu	Lys	Lys	Gln	Leu	Ala	210	215	220
Asp	Glu	Arg	Ser	Asn	Arg	Asp	Glu	Leu	Glu	Leu	Glu	Leu	Ala	Glu	Asn	225	230	235
Arg	Lys	Leu	Leu	Thr	Glu	Lys	Asp	Ala	Gln	Ile	Ala	Met	Met	Gln	Gln	245	250	255
Arg	Ile	Asp	Arg	Leu	Ala	Leu	Leu	Asn	Glu	Lys	Gln	Ala	Ala	Ser	Pro	260	265	270
Leu	Glu	Pro	Lys	Glu	Leu	Glu	Glu	Leu	Arg	Asp	Lys	Asn	Glu	Ser	Leu	275	280	285
Thr	Met	Arg	Leu	His	Glu	Thr	Leu	Lys	Gln	Cys	Gln	Asp	Leu	Lys	Thr	290	295	300
Glu	Lys	Ser	Gln	Met	Asp	Arg	Lys	Ile	Asn	Gln	Leu	Ser	Glu	Glu	Asn	305	310	315
Gly	Asp	Leu	Ser	Phe	Lys	Leu	Arg	Glu	Phe	Ala	Ser	His	Leu	Gln	Gln	325	330	335
Leu	Gln	Asp	Ala	Leu	Asn	Glu	Leu	Thr	Glu	Glu	His	Ser	Lys	Ala	Thr	340	345	350
Gln	Glu	Trp	Leu	Glu	Lys	Gln	Ala	Gln	Leu	Glu	Lys	Glu	Leu	Ser	Ala	355	360	365
Ala	Leu	Gln	Asp	Lys	Lys	Cys	Leu	Glu	Glu	Lys	Asn	Glu	Ile	Leu	Gln	370	375	380
Gly	Lys	Leu	Ser	Gln	Leu	Glu	Glu	His	Leu	Ser	Gln	Leu	Gln	Asp	Asn	385	390	395
Pro	Pro	Gln	Glu	Lys	Gly	Glu	Val	Leu	Gly	Asp	Val	Leu	Gln	Leu	Glu	405	410	415
Thr	Leu	Lys	Gln	Glu	Ala	Ala	Thr	Leu	Ala	Ala	Asn	Asn	Thr	Gln	Leu	420	425	430
Gln	Ala	Arg	Val	Glu	Met	Leu	Glu	Thr	Glu	Arg	Gly	Gln	Gln	Glu	Ala	435	440	445
Lys	Leu	Leu	Ala	Glu	Arg	Gly	His	Phe	Glu	Glu	Glu	Lys	Gln	Gln	Leu	450	455	460
Ser	Ser	Leu	Ile	Thr	Asp	Leu	Gln	Ser	Ser	Ile	Ser	Asn	Leu	Ser	Gln	465	470	475
Ala	Lys	Glu	Glu	Leu	Glu	Gln	Ala	Ser	Gln	Ala	His	Gly	Ala	Arg	Leu	485	490	495
Thr	Ala	Gln	Val	Ala	Ser	Leu	Thr	Ser	Glu	Leu	Thr	Thr	Leu	Asn	Ala	500	505	510
Thr	Ile	Gln	Gln	Gln	Asp	Gln	Glu	Leu	Ala	Gly	Leu	Lys	Gln	Gln	Ala	515	520	525

Lys Glu Lys Gln Ala Gln Leu Ala Gln Thr Leu Gln Gln Gln Glu Gln  
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 Ala Ser Gln Gly Leu Arg His Gln Val Glu Gln Leu Ser Ser Ser Leu  
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 Lys Gln Lys Glu Gln Gln Leu Lys Glu Val Ala Glu Lys Gln Glu Ala  
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 Thr Arg Gln Asp His Ala Gln Gln Leu Ala Thr Ala Ala Glu Glu Arg  
 580 585 590  
 Glu Ala Ser Leu Arg Glu Arg Asp Ala Ala Leu Lys Gln Leu Glu Ala  
 595 600 605  
 Leu Glu Lys Glu Lys Ala Ala Lys Leu Glu Ile Leu Gln Gln Gln Leu  
 610 615 620  
 Gln Val Ala Asn Glu Ala Arg Asp Ser Ala Gln Thr Ser Val Thr Gln  
 625 630 635 640  
 Ala Gln Arg Glu Lys Ala Glu Leu Ser Arg Lys Val Glu Glu Leu Gln  
 645 650 655  
 Ala Cys Val Glu Thr Ala Arg Gln Glu Gln His Glu Ala Gln Ala Gln  
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 Val Ala Glu Leu Glu Leu Gln Leu Arg Ser Glu Gln Gln Lys Ala Thr  
 675 680 685  
 Glu Lys Glu Arg Val Ala Gln Glu Lys Asp Gln Leu Gln Glu Gln Leu  
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 Gln Ala Leu Lys Glu Ser Leu Lys Val Thr Lys Gly Ser Leu Glu Glu  
 705 710 715 720  
 Glu Lys Arg Arg Ala Ala Asp Ala Leu Glu Glu Gln Gln Arg Cys Ile  
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 Ser Glu Leu Lys Ala Glu Thr Arg Ser Leu Val Glu Gln His Lys Arg  
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 Ala Arg Leu Leu Gln Leu Gly Glu Ala His Gln Ala Glu Thr Glu Val  
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 Ser Glu Cys Glu Gln Leu Val Lys Glu Val Ala Ala Trp Arg Asp Gly  
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 Tyr Glu Asp Ser Gln Gln Glu Glu Ala Gln Tyr Gly Ala Met Phe Gln  
 820 825 830  
 Glu Gln Leu Met Thr Leu Lys Glu Glu Cys Glu Lys Ala Arg Gln Glu  
 835 840 845  
 Leu Gln Glu Ala Lys Glu Lys Val Ala Gly Ile Glu Ser His Ser Glu  
 850 855 860  
 Leu Gln Ile Ser Arg Gln Gln Asn Lys Leu Ala Glu Leu His Ala Asn  
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 Gln Gln Glu Thr Ala Ser Arg Glu Leu Val Lys Glu Pro Ala Arg Ala  
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 Gly Asp Arg Gln Pro Glu Trp Leu Glu Glu Gln Gln Gly Arg Gln Phe  
 945 950 955 960



Cys Ser Thr Gln Ala Ala Leu Gln Ala Met Glu Arg Glu Ala Glu Gln  
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 Thr Leu Gln Leu Glu His Thr Ser Thr Gln Ala Leu Val Ser Glu Leu  
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 1795 1800 1805  
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 1845 1850 1855  
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 1860 1865 1870  
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 1875 1880 1885  
 Tyr Met Gly Thr Cys Gln Asp Glu Pro Glu Gln Leu Asp Asp Trp Asn  
 1890 1895 1900  
 Arg Ile Ala Glu Leu Gln Gln Arg Asn Arg Val Cys Pro Pro His Leu  
 1905 1910 1915 1920  
 Lys Thr Cys Tyr Pro Leu Glu Ser Arg Pro Ser Leu Ser Leu Gly Thr  
 1925 1930 1935  
 Ile Thr Asp Glu Glu Met Lys Thr Gly Asp Pro Gln Glu Thr Leu Arg  
 1940 1945 1950  
 Arg Ala Ser Met Gln Pro Ile Gln Ile Ala Glu Gly Thr Gly Ile Thr  
 1955 1960 1965  
 Thr Arg Gln Gln Arg Lys Arg Val Ser Leu Glu Pro His Gln Gly Pro  
 1970 1975 1980  
 Gly Thr Pro Glu Ser Lys Lys Ala Thr Ser Cys Phe Pro Arg Pro Met  
 1985 1990 1995 2000  
 Thr Pro Arg Asp Arg His Glu Gly Arg Lys Gln Ser Thr Thr Glu Ala  
 2005 2010 2015  
 Gln Lys Lys Ala Ala Pro Ala Ser Thr Lys Gln Ala Asp Arg Arg Gln  
 2020 2025 2030  
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 Val Ile Leu Lys Phe Val Leu Asp His Glu Asp Gly Leu Asn Leu Asn  
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 145 150 155 160  
 Ser Ser Thr Phe Pro Glu Glu Leu Ser Pro Pro Ser His Gln Ala Lys  
 165 170 175  
 Arg Glu Ile Arg Phe Leu Glu Leu Gln Lys Val Ala Ser Ser Ser  
 180 185 190  
 Gly Asn Asn Phe Leu Ser Gly Ser Pro Ala Ser Pro Met Gly Asp Ile  
 195 200 205  
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 Asp Glu Arg Ser Asn Arg Asp Glu Leu Glu Leu Glu Leu Ala Glu Asn  
 225 230 235 240  
 Arg Lys Leu Leu Thr Glu Lys Asp Ala Gln Ile Ala Met Met Gln Gln  
 245 250 255  
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 260 265 270  
 Leu Glu Pro Lys Glu Leu Glu Glu Leu Arg Asp Lys Asn Glu Ser Leu  
 275 280 285  
 Thr Met Arg Leu His Glu Thr Leu Lys Gln Cys Gln Asp Leu Lys Thr  
 290 295 300  
 Glu Lys Ser Gln Met Asp Arg Lys Ile Asn Gln Leu Ser Glu Glu Asn  
 305 310 315 320  
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 325 330 335  
 Leu Gln Asp Ala Leu Asn Glu Leu Thr Glu Glu His Ser Lys Ala Thr  
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 Gln Glu Trp Leu Glu Lys Gln Ala Gln Leu Glu Lys Glu Leu Ser Ala  
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 Ala Leu Gln Asp Lys Lys Cys Leu Glu Glu Lys Asn Glu Ile Leu Gln  
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 435 440 445  
 Lys Leu Leu Ala Glu Arg Gly His Phe Glu Glu Glu Lys Gln Gln Leu  
 450 455 460  
 Ser Ser Leu Ile Thr Asp Leu Gln Ser Ser Ile Ser Asn Leu Ser Gln  
 465 470 475 480  
 Ala Lys Glu Glu Leu Glu Gln Ala Ser Gln Ala His Gly Ala Arg Leu  
 485 490 495  
 Thr Ala Gln Val Ala Ser Leu Thr Ser Glu Leu Thr Thr Leu Asn Ala  
 500 505 510

Thr	Ile	Gln	Gln	Gln	Asp	Gln	Glu	Leu	Ala	Gly	Leu	Lys	Gln	Gln	Ala	
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Lys	Glu	Lys	Gln	Ala	Gln	Leu	Ala	Gln	Thr	Leu	Gln	Gln	Gln	Glu	Gln	
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Ala	Ser	Gln	Gly	Leu	Arg	His	Gln	Val	Glu	Gln	Leu	Ser	Ser	Ser	Leu	
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Lys	Gln	Lys	Glu	Gln	Gln	Leu	Lys	Glu	Val	Ala	Glu	Lys	Gln	Glu	Ala	
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Thr	Arg	Gln	Asp	His	Ala	Gln	Gln	Leu	Ala	Thr	Ala	Ala	Glu	Glu	Arg	
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Glu	Ala	Ser	Leu	Arg	Glu	Arg	Asp	Ala	Ala	Leu	Lys	Gln	Leu	Glu	Ala	
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Leu	Glu	Lys	Glu	Lys	Ala	Ala	Lys	Leu	Glu	Ile	Leu	Gln	Gln	Gln	Leu	
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Gln	Val	Ala	Asn	Glu	Ala	Arg	Asp	Ser	Ala	Gln	Thr	Ser	Val	Thr	Gln	
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Ala	Gln	Arg	Glu	Lys	Ala	Glu	Leu	Ser	Arg	Lys	Val	Glu	Glu	Leu	Gln	
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Ala	Cys	Val	Glu	Thr	Ala	Arg	Gln	Glu	Gln	His	Glu	Ala	Gln	Ala	Gln	
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Val	Ala	Glu	Leu	Glu	Leu	Gln	Leu	Arg	Ser	Glu	Gln	Gln	Lys	Ala	Thr	
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Glu	Lys	Glu	Arg	Val	Ala	Gln	Glu	Lys	Asp	Gln	Leu	Gln	Glu	Gln	Leu	
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Gln	Ala	Leu	Lys	Glu	Ser	Leu	Lys	Val	Thr	Lys	Gly	Ser	Leu	Glu	Glu	
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Glu	Lys	Arg	Arg	Ala	Ala	Asp	Ala	Leu	Glu	Glu	Gln	Gln	Arg	Cys	Ile	
				725					730					735		
Ser	Glu	Leu	Lys	Ala	Glu	Thr	Arg	Ser	Leu	Val	Glu	Gln	His	Lys	Arg	
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Glu	Arg	Lys	Glu	Leu	Glu	Glu	Glu	Arg	Ala	Gly	Arg	Lys	Gly	Leu	Glu	
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Leu	Arg	Arg	Glu	Leu	Ala	Glu	Ala	Met	Ala	Ala	Gln	His	Thr	Ala	Glu	
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Ser	Glu	Cys	Glu	Gln	Leu	Val	Lys	Glu	Val	Ala	Ala	Trp	Arg	Glu	Arg	
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Tyr	Glu	Asp	Ser	Gln	Gln	Glu	Glu	Ala	Gln	Tyr	Gly	Ala	Met	Phe	Gln	
			820					825					830			
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Leu	Ala	Arg	Ala	Leu	Gln	Gln	Val	Gln	Glu	Lys	Glu	Val	Arg	Ala	Gln	
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Lys	Leu	Ala	Asp	Asp	Leu	Ser	Thr	Leu	Gln	Glu	Lys	Met	Ala	Ala	Thr	
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Ser	Lys	Glu	Val	Ala	Arg	Leu	Glu	Thr	Leu	Val	Arg	Lys	Ala	Gly	Glu	
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Gln	Gln	Glu	Thr	Ala	Ser	Arg	Glu	Leu	Val	Lys	Glu	Pro	Ala	Arg	Ala	
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 1795 1800 1805

Arg Arg Thr Thr Gln Ile Ile Asn Ile Thr Met Thr Lys Lys Leu Asp  
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 Val Glu Glu Pro Asp Ser Ala Asn Ser Ser Phe Tyr Ser Thr Arg Ser  
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 Gly Thr Cys Gln Asp Glu Pro Glu Gln Leu Asp Asp Trp Asn Arg Ile  
 1905 1910 1915 1920  
 Ala Glu Leu Gln Gln Arg Asn Arg Val Cys Pro Pro His Leu Lys Thr  
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 Cys Tyr Pro Leu Glu Ser Arg Pro Ser Leu Ser Leu Gly Thr Ile Thr  
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 Ser Met Gln Pro Ile Gln Ile Ala Glu Gly Thr Gly Ile Thr Thr Arg  
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Gln	Leu	Ile	Arg	Gly	Leu	Gly	Gln	Glu	Cys	Val	Leu	Ser	Ser	Ser	Pro		
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Ala	Val	Leu	Ala	Leu	Gln	Thr	Ser	Leu	Val	Phe	Ser	Arg	Asp	Phe	Gly		
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Leu	Leu	Val	Phe	Val	Arg	Lys	Ser	Leu	Asn	Ser	Ile	Glu	Phe	Arg	Glu		
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Cys	Arg	Glu	Glu	Ile	Leu	Lys	Phe	Leu	Cys	Ile	Phe	Leu	Glu	Lys	Met		
				85					90					95			
Gly	Gln	Lys	Ile	Ala	Pro	Tyr	Ser	Val	Glu	Ile	Lys	Asn	Thr	Cys	Thr		
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Ser	Val	Tyr	Thr	Lys	Asp	Arg	Ala	Ala	Lys	Cys	Lys	Ile	Pro	Ala	Leu		
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Asp	Leu	Leu	Ile	Lys	Leu	Leu	Gln	Thr	Phe	Arg	Ser	Ser	Arg	Leu	Met		
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Asp	Glu	Phe	Lys	Ile	Gly	Glu	Leu	Phe	Ser	Lys	Phe	Tyr	Gly	Glu	Leu		
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Ala	Leu	Lys	Lys	Lys	Ile	Pro	Asp	Thr	Val	Leu	Glu	Lys	Val	Tyr	Glu		
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Leu	Leu	Gly	Leu	Leu	Gly	Glu	Val	His	Pro	Ser	Glu	Met	Ile	Asn	Asn		
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Ala	Glu	Asn	Leu	Phe	Arg	Ala	Phe	Leu	Gly	Glu	Leu	Lys	Thr	Gln	Met		
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Thr	Ser	Ala	Val	Arg	Glu	Pro	Lys	Leu	Pro	Val	Leu	Ala	Gly	Cys	Leu		
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Lys	Gly	Leu	Ser	Ser	Leu	Leu	Cys	Asn	Phe	Thr	Lys	Ser	Met	Glu	Glu		
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Asp	Pro	Gln	Thr	Ser	Arg	Glu	Ile	Phe	Asn	Phe	Val	Leu	Lys	Ala	Ile		
				245					250					255			
Arg	Pro	Gln	Ile	Asp	Leu	Lys	Arg	Tyr	Ala	Val	Pro	Ser	Ala	Gly	Leu		
			260					265					270				
Arg	Leu	Phe	Ala	Leu	His	Ala	Ser	Gln	Phe	Ser	Thr	Cys	Leu	Leu	Asp		
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Asn	Tyr	Val	Ser	Leu	Phe	Glu	Val	Leu	Ile	Lys	Trp	Cys	Ala	His	Thr		
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Asn	Val	Glu	Leu	Lys	Lys	Ala	Ala	Leu	Ser	Ala	Leu	Glu	Ser	Phe	Leu		
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Lys	Gln	Val	Ser	Asn	Met	Val	Ala	Lys	Asn	Ala	Glu	Met	His	Lys	Asn		
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Lys	Leu	Gln	Tyr	Glu	Met	Glu	Gln	Phe	Tyr	Gly	Ile	Ile	Arg	Asn	Val		
			340					345					350				
Asp	Ser	Asn	Asn	Lys	Glu	Leu	Ser	Ile	Ala	Ile	Arg	Gly	Tyr	Gly	Leu		
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Phe	Ala	Gly	Pro	Cys	Lys	Val	Ile	Asn	Ala	Lys	Asp	Val	Asp	Phe	Met		
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Tyr	Val	Glu	Leu	Ile	Gln	Arg	Cys	Lys	Gln	Met	Phe	Leu	Thr	Gln	Thr		
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Asp	Thr	Gly	Asp	Tyr	Arg	Val	Tyr	Gln	Met	Pro	Ser	Phe	Leu	Gln	Ser		
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Val	Ala	Ser	Val	Leu	Leu	Tyr	Leu	Asp	Thr	Val	Pro	Glu	Val	Tyr	Thr		
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Pro	Val	Leu	Glu	His	Leu	Val	Val	Met	Gln	Ile	Asp	Ser	Phe	Pro	Gln		
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Tyr	Ser	Pro	Lys	Met	Gln	Leu	Val	Cys	Cys	Arg	Ala	Ile	Val	Lys	Val	450	455	460
Phe	Leu	Ala	Leu	Ala	Ala	Lys	Gly	Pro	Val	Leu	Arg	Asn	Cys	Ile	Ser	465	470	475
Thr	Val	Val	His	Gln	Gly	Leu	Ile	Arg	Ile	Cys	Ser	Lys	Pro	Val	Val	485	490	495
Leu	Pro	Lys	Gly	Pro	Glu	Ser	Glu	Ser	Glu	Asp	His	Arg	Ala	Ser	Gly	500	505	510
Glu	Val	Arg	Thr	Gly	Lys	Trp	Lys	Val	Pro	Thr	Tyr	Lys	Asp	Tyr	Val	515	520	525
Asp	Leu	Phe	Arg	His	Leu	Leu	Ser	Ser	Asp	Gln	Met	Met	Asp	Ser	Ile	530	535	540
Leu	Ala	Asp	Glu	Ala	Phe	Phe	Ser	Val	Asn	Ser	Ser	Ser	Glu	Ser	Leu	545	550	555
Asn	His	Leu	Leu	Tyr	Asp	Glu	Phe	Val	Lys	Ser	Val	Leu	Lys	Ile	Val	565	570	575
Glu	Lys	Leu	Asp	Leu	Thr	Leu	Glu	Ile	Gln	Thr	Val	Gly	Glu	Gln	Glu	580	585	590
Asn	Gly	Asp	Glu	Ala	Pro	Gly	Val	Trp	Met	Ile	Pro	Thr	Ser	Asp	Pro	595	600	605
Ala	Ala	Asn	Leu	His	Pro	Ala	Lys	Pro	Lys	Asp	Phe	Ser	Ala	Phe	Ile	610	615	620
Asn	Leu	Val	Glu	Phe	Cys	Arg	Glu	Ile	Leu	Pro	Glu	Lys	Gln	Ala	Glu	625	630	635
Phe	Phe	Glu	Pro	Trp	Val	Tyr	Ser	Phe	Ser	Tyr	Glu	Leu	Ile	Leu	Gln	645	650	655
Ser	Thr	Arg	Leu	Pro	Leu	Ile	Ser	Gly	Phe	Tyr	Lys	Leu	Leu	Ser	Ile	660	665	670
Thr	Val	Arg	Asn	Ala	Lys	Lys	Ile	Lys	Tyr	Phe	Glu	Gly	Val	Ser	Pro	675	680	685
Lys	Ser	Leu	Lys	His	Ser	Pro	Glu	Asp	Pro	Glu	Lys	Tyr	Ser	Cys	Phe	690	695	700
Ala	Leu	Phe	Val	Lys	Phe	Gly	Lys	Glu	Val	Ala	Val	Lys	Met	Lys	Gln	705	710	715
Tyr	Lys	Asp	Glu	Leu	Leu	Ala	Ser	Cys	Leu	Thr	Phe	Leu	Leu	Ser	Leu	725	730	735
Pro	His	Asn	Ile	Ile	Glu	Leu	Asp	Val	Arg	Ala	Tyr	Val	Pro	Ala	Leu	740	745	750
Gln	Met	Ala	Phe	Lys	Leu	Gly	Leu	Ser	Tyr	Thr	Pro	Leu	Ala	Glu	Val	755	760	765
Gly	Leu	Asn	Ala	Leu	Glu	Glu	Trp	Ser	Ile	Tyr	Ile	Asp	Arg	His	Val	770	775	780
Met	Gln	Pro	Tyr	Tyr	Lys	Asp	Ile	Leu	Pro	Cys	Leu	Asp	Gly	Tyr	Leu	785	790	795
Lys	Thr	Ser	Ala	Leu	Ser	Asp	Glu	Thr	Lys	Asn	Asn	Trp	Glu	Val	Ser	805	810	815
Ala	Leu	Ser	Arg	Ala	Ala	Gln	Lys	Gly	Phe	Asn	Lys	Val	Val	Leu	Lys	820	825	830
His	Leu	Lys	Lys	Thr	Lys	Asn	Leu	Ser	Ser	Asn	Glu	Ala	Ile	Ser	Leu	835	840	845
Glu	Glu	Ile	Arg	Ile	Arg	Val	Val	Gln	Met	Leu	Gly	Ser	Leu	Gly	Gly	850	855	860
Gln	Ile	Asn	Lys	Asn	Leu	Leu	Thr	Val	Thr	Ser	Ser	Asp	Glu	Met	Met	865	870	875

Lys Ser Tyr Val Ala Trp Asp Arg Glu Lys Arg Leu Ser Phe Ala Val  
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 Pro Phe Arg Glu Met Lys Pro Val Ile Phe Leu Asp Val Phe Leu Pro  
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 Tyr Tyr Lys Ile Leu Asp Val Met Tyr Ser Arg Leu Pro Lys Asp Asp  
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 Lys Arg Arg Tyr Asn Phe Pro Val Glu Val Glu Val Pro Met Glu Arg  
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 Lys Lys Lys Tyr Ile Glu Ile Arg Lys Glu Ala Arg Glu Ala Ala Asn  
 2005 2010 2015  
 Gly Asp Ser Asp Gly Pro Ser Tyr Met Ser Ser Leu Ser Tyr Leu Ala  
 2020 2025 2030  
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 Leu Glu Leu Glu Met Asp Glu Leu Asn Arg His Glu Cys Met Ala Pro  
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 Gly Glu Glu Asp Ser Val Pro Arg Asp Leu Pro Ser Trp Met Lys Phe  
 2115 2120 2125  
 Leu His Gly Lys Leu Gly Asn Pro Ile Val Pro Leu Asn Ile Arg Leu  
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 Phe Leu Ala Lys Leu Val Ile Asn Thr Glu Glu Val Phe Arg Pro Tyr  
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Phe Glu Lys Phe Ser Gly Lys Asp Pro Asn Ser Lys Asp Asn Ser Val
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Asp Pro Gln Cys Gly Ile Gln Ser Ser Glu Tyr Phe Gln Ala Leu Val
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Lys Ser Phe Pro Pro Leu Ala Asp Arg Phe Met Asn Ala Val Phe Phe
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Ser Thr Thr Cys Arg Glu Gln Met Tyr Asn Ile Leu Met Trp Ile His
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Asp Trp Arg Phe Arg Ser Thr Val Leu Thr Pro Met Phe Val Glu Thr
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 Phe Ala Ala Glu Tyr Ala Lys Ser Asn Arg Ser Thr Cys Lys Gly Cys  
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Lys	Lys	Glu	Lys	Asp	Lys	Asp	Ser	Lys	Leu	Glu	Lys	Ala	Leu	Lys	Ala		
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Lys	Glu	Phe	Arg	Glu	Ile	Ser	Tyr	Leu	Lys	Lys	Leu	Lys	Val	Lys	Lys		
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